

### In the Claims

1. (Previously Presented) A steel product for induction hardening that consists of

C: 0.35-0.7 %,

Si: more than 0.40 to 1.1 %,

Mn: 0.2-2.0 %,

Al: 0.005-0.25 %,

Ti: 0.005-0.1 %,

Mo: 0.05-0.6 %,

B: 0.0003-0.006 %,

S: 0.06 % or less,

P: 0.02 % or less,

Cr: 0.2 % or less, by mass, and

a balance of Fe and inevitable impurities,

and has a structure of bainite and/or martensite, the total volume fraction of bainite and martensite being 10 % or more.

2. (Original) The steel product for induction hardening according to Claim 1, further comprising at least one selected from the group consisting of

Cu: 1.0 % or less,

Ni: 3.5 % or less,

Co: 1.0 % or less,

Nb: 0.1 % or less, and

V: 0.5 % or less, by mass.

- 3.-4. (Cancelled)

5. (Original) An induction hardened member made of the steel product for induction hardening according to Claim 2, wherein the prior austenite grain size of a hardened layer formed on the surface of the steel product by induction hardening is 12  $\mu\text{m}$  or less through the thickness of the hardened layer.

6. (Original) The induction hardened member according to Claim 5, wherein the thickness of a hardened layer formed on the surface of the steel product by induction hardening is 2 mm or more.

7. (Original) A method for manufacturing a steel product for induction hardening, comprising the steps of:

hot working a steel consisting of the composition in Claim 1; and  
cooling the hot worked steel at a cooling rate of at least 0.2 °C/s.

8. (Original) A method for manufacturing a steel product for induction hardening, comprising the steps of:

hot working a steel consisting of the composition in Claim 2; and  
cooling the hot worked steel at a cooling rate of at least 0.2 °C/s.

9. (Original) A method for manufacturing an induction hardened member comprising the step of: subjecting the steel product for induction hardening manufactured by the method according to Claim 7 to induction hardening at least once, wherein the heating temperature of the final induction hardening is 800-1000 °C.

10. (Original) A method for manufacturing an induction hardened member comprising the step of: subjecting the steel product for induction hardening manufactured by the method according to Claim 8 to induction hardening at least once, wherein the heating temperature of the final induction hardening is 800-1000 °C.

11. (Original) A method for manufacturing an induction hardened member comprising the step of: subjecting the steel product for induction hardening manufactured by the method according to Claim 7 to induction hardening at least once, wherein the heating temperature of all the induction hardenings is 800-1000 °C.

12. (Original) A method for manufacturing an induction hardened member comprising the step of subjecting the steel product for induction hardening manufactured by the method according to Claim 8 to induction hardening at least once, wherein the heating temperature of all the induction hardenings is 800-1000 °C.

13. (Original) The method for manufacturing an induction hardened member according to Claim 9, wherein the heating time of the final induction hardening is 5 seconds or less.

14. (Original) The method for manufacturing an induction hardened member according to Claim 10, wherein the heating time of the final induction hardening is 5 seconds or less.

15. (Original) The method for manufacturing an induction hardened member according to Claim 11, wherein the heating time of all the induction hardenings is 5 seconds or less.

16. (Original) The method for manufacturing an induction hardened member according to Claim 12, wherein the heating time of all the induction hardenings is 5 seconds or less.

17. (Original) The method for manufacturing an induction hardened member according to Claim 9, wherein the thickness of a hardened layer formed on the surface of the steel product by induction hardening is 2 mm or more.

18. (Original) The method for manufacturing an induction hardening member according to Claim 10, wherein the thickness of a hardened layer formed on the surface of the steel product by induction hardening is 2 mm or more.

19. (Original) The method for manufacturing an induction hardening member according to Claim 11, wherein the thickness of a hardened layer formed on the surface of the steel product by induction hardening is 2 mm or more.

20. (Original) The method for manufacturing an induction hardening member according to Claim 12, wherein the thickness of a hardened layer formed on the surface of the steel product by induction hardening is 2 mm or more.

21. (New) A steel product for induction hardening that consists of

C: 0.35-0.7 %,

Si: more than 0.40 to 1.1 %,

Mn: 0.2-2.0 %,

Al: 0.005-0.25 %,

Ti: 0.005-0.1 %,

Mo: 0.05-0.6 %,

B: 0.0003-0.006 %,

S: 0.06 % or less,

P: 0.02 % or less,

Cr: 0.2 % or less, by mass, and

a balance of Fe and inevitable impurities,

and has a structure of bainite and/or martensite, the total volume fraction of bainite and martensite being 10 % or more, and the prior austenite grain size of a hardened layer formed on the surface of the steel product by induction hardening is 12  $\mu\text{m}$  or less through the thickness of the hardened layer.

22. (New) The induction hardened member according to Claim 21, wherein the thickness of a hardened layer formed on the surface of the steel product by induction hardening is 2 mm or more.